Format Validation Tool ING Commercial Banking

Help instructions and additional information For Payment and collection formats

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This document is meant for both ING internal employees and ING customers

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The Format Validation Tool (FVT) is a supporting tool which can help your organization or department with the implementation of:

- 1. New customers using ING formats for the first time
- 2. Existing customers wanting to use new ING formats
- 3. Existing customers changing their current ING formats
- 4. Existing customers with issues in their current ING formats

FVT will help you to functionally test your implemented formats. Please bear in mind that a successful functional test within this tool is not a guarantee for a successful run within ING. FVT can locate 95% of the errors in a file, but some parameters can't be checked by FVT. (f.i. a check on whether the customer is authorized to do a certain type of payment is not possible).

For more information about FVT you can contact your local customer support desk or your ING implementation manager.

2.1 Validation process

File formats that are validated in this tool follow the same process, no matter what format is being tested.

- 1. Login with the credentials you received from ING and start using the tool.
- 2. You are asked to accept a disclaimer before using the tool. Click "Accept" to proceed.
- 3. Select the format type you wish to use for validation. This is the type you used to create your file.
- 4. Set the correct parameter for correct validation. This parameter is the channel.
- 5. Select the file you wish to validate. This file is of the same type as the file type you selected earlier.
- 6. The format file is uploaded to the tool together with two parameters (described further in the help instructions). The first validation step is done against the official standard of that format (if applicable). The majority of the possible errors will be found in this step.
- 7. The second validation step is a validation of the file against the ING business rules. The ING business rules are specific ING instructions which have been added to the format guidelines to assure that an offered file will be processed by ING systems.

2. General information





8. The third validation step is the presentation of a report which shows that FVT approves the file or which shows an overview of all found errors in the different sections of the file.

All validation steps are described in more detail in the next paragraphs. All manual steps to be performed by the user of the tool are described in the next chapter.

2.2 Validation in three steps

Validate against format standard

The format standard stands for the latest official standard set up by the founding organisation which is used as the basis for the ING specific format. For example, the ING PAF XML is based on the ISO20022 standard for SEPA XML. The first validation is against the standard.

If a file does not comply with the standard it will not be accepted by the ING systems. This first step validates 80% of the file.

Validate against ING business rules

The ING business rules are the specifications ING added to or changed in the standard to make it suitable for the ING systems and ING products. The second validation is against these specifications. This second step validates the other 20% of the file.

Report findings

After all validation steps are performed, a report will be created. This report is divided in four sections; a summary, the structure findings, the file header findings and the actual payment findings.

- 1. The introduction explains if a validation was successful or not, by presenting a small summary. The summary shows:
 - a. A red cross or a green check mark.
 - b. The name of the format type which was validated.
 - c. The total number of transactions found.
 - d. The total amount of all transactions found.
 - e. The total number of errors* found.
 - f. The total number of warnings* found.

*The difference between **errors** and warnings is that errors will block processing. Warnings are informative and won't block processing.



2. The structure findings are all findings that are related to the sequence of the records, if a record is available within the standard (and complies with the standard) and if a record is or is not supported by ING (this last type results in a warning). Structure findings are validated separately. If an error occurs in the structure in 90% of the cases the validation process does not start with the next validation area, because structure errors can affect the whole format file. Always validate your file again after adjusting structure errors.

Note: Structure validation is done against the ISO20022 standard. This means the report could show alternatives for a record it does not recognise or it misses which are not in the ING guidelines. If such an error occurs always advise the ING guidelines for the correct alternative.

- 3. The header section is validated separately as an error in the header section can result in errors in all payments afterwards. Therefore errors in the header section are mentioned in a separate block. In some cases an error in the header section results in a single error report. This does not mean there are no other errors found. In such a case the tool stopped the validation as the error could be an error which affects the rest of the file. Always validate your file again after adjusting an error in the header section.
- 4. The payment findings are all findings related to syntax errors or functional errors in the payments section. Functional errors can be the incorrect use of currencies or dates. Syntax errors are incorrect date formats and wrong use of characters.

In general it is advised to validate your format file until the tool doesn't find errors anymore and the format file passes the validation on all areas.



3. Working with FVT

Are you e	nrolled?
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	semane Password Logis
Phank you for visiting	the ING Format Validation Web site. IND offers you a solution to assist you with the testing and validaties of your INO format files.
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der you have tested	cour format life with this loor you can start with the next step in the implementation phase.
Mer envolvment, this	validation Web site will walk you through the validation process, which consists of the following steps
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The campiete instruc	tions are available in the help section of this filled site. If you are in need of assistance you can contact your HIG contact person. We
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3.1 Validation process

When you start-up FVT using the url

https://www.ingsepa.com/formatvalidationtool/en/ you will enter the homepage. Here you can enter your username and password (1) provided by ING to access the actual validation tool. On the left you see a fixed menu which will appear throughout the whole validation process. Please read the disclaimer carefully before starting the validation process. It is presented directly after you login (2), but you can also find the disclaimer at the bottom of the page. To log on enter the username and password and click 'login'. After accepting the disclaimer you will access the tool and you can start validating a file.

3.2 Selecting a format

The first step in the process is selecting the format you wish to validate. This format should be exactly the same format which you used for creating your test file. You can select a format by clicking the link (1). You will be directed to the next step in the process. Please notice that in the top right corner of the screen you can see you are logged in (2). If you are finished you can use the logoff link to exit the application.

Germany XML SEPA Pain001 Credit Transfer ZKA		
Upload File Browse Payment Channel Isabel I 1 Validate ZKA. Credit Transfer 2.5		

3.3 Select channel

The channel selection box (1) is a redundant feature. In a next release of the tool this feature will be removed. The channel selection box currently has no effect on validations done in the chosen validation service.



3.4 Uploading and validating a file

The third step is selecting the file you wish to validate. By clicking the "browse" button (1) you will open an explorer window (2) from which you can browse to the file you wish to validate. Select the file, check your channel parameter (3) and click the "validate" button. A window pops up which confirms the file is being validated. This can take some time depending on the size of your file. (Please be aware that there is a limit for the time your browser will wait for a response). When the application is ready it will generate a report report with all findings



3.5 The report

Eventually a report will be presented with all findings. This report shows a small summary and findings per section.

- Summary section showing the (1) number of transactions and amount found and the number of errors and warnings found.
- 2. Structure elements section (2), which shows all the structure errors and warnings. This means incorrect use of tags and incorrect use of tag order.
- 3. Header elements section (3), this section is validated separately from the payments section as it is also a different section in the format description.
- 4. Payment elements section (4) , which shows the different errors in all the single payments.
- 5. Disclaimer (5) explaining the terms for the information the tool provides.

Section two, three and four include the test on the correct use of content in the tags. For example the format for BIC and IBAN, but also field length, dates and correct use of dates.

If you receive a pass for this three sections your file has been approved and you can continue your test process.

at a d d d a	
The Netherlands X	ML SEPA Pain001 Credit Transfer NVB RB4.0
Summary:	2
Total amount	10.00
Total Errors*	1
Total Warnings**	1
"An error is a signal that the element causing the error	will block processing of the batch within ING systems.
**A warning is a signal that the element causing the w	aming will be ignored by ING. This will not lead to rejection of the file, batch or payment.
The Netherlands XML SEPA Pain001 Cre	edit Transfer NVB RB4.0
XML Elements: Please review the foll	owing warnings
XML Element Warning 1	
The xpath Document/CstmrCdtTrfinitn Pretint BtchBookg	will be ignored by ING.
HEADER: Pass	
PAYMENT: Fail	
Payment Error 1	
This date must be between 5 days in the past and 30 day	ys in the future.
«Document»	
<pre>cCstmrCdtTrfInitn></pre>	
<regiixotndt>2011-11-01<td>talt></td></regiixotndt>	talt>
Disclaimer:	
The aim of the format validation tool is exclusively to facilitat	e your internal development process and improve your time to market. The formativalidation to
does not ensure that your file formats meet all your bank an product implementation team.	dior product requirements i.e. your file format still needs to be approved by your bank and/or
ING Bank N.V. (ING) strongly advises to avoid the usage of I channels which you are using to access this tool.	we data. Although your data is not stored and can not be accessed, we have no control over the
The current validation process is in line with the latest public	shed bank specific format guidelines. For further information please refer to your bank



The following validation services are available.

SEPA credit transfer	Additional information
pain.001.002.03	
Germany XML SEPA Pain001 Credit Transfer	German SEPA XML files are
ZKA	renamed to 'pain.001.002.03'
	instead of the standard
	'pain.001.001.03'. ING supports
	both versions.
pain.001.001.03	
Austria XML SEPA Pain001 Credit Transfer	
STUZZA	
Belgium XML Generic Pain001 Credit	This format type is used for both
Transfer Febelfin	SEPA payments as International
	non-SEPA payments in Belgium.
Belgium XML SEPA Pain001 Credit Transfer	This is the standard SEPA credit
Febelfin	transfer format type, only for SEPA
	payments.
France XML SEPA Pain001 Credit Transfer	
GUF	
Germany XML SEPA Pain001 Credit Transfer	This format type is the same as the
ZKA	'pain.001.002.03' format type,
	except for the name, which is
	'pain.001.001.03'.
Global XML SEPA Pain001 Credit Transfer	Please inform at your ING contact if
EOM for BE/DE/FR/NL	you are allowed to use this format
	type. This is a new format type
	allowing SEPA payments for the
	four countries mentioned
Ireland XML SEPA Pain001 Credit Transfer	
IPSO	
Luxembourg XML SEPA Pain001 Credit	
Transfer	
PAF XML Pain001 Credit Transfer	Please inform at your ING contact if
	you are allowed to use this format
	type. This format type is used for
	mixing different payment types,
	including SEPA payments,
	International non-SEPA payments,
	domestic non-SEPA payments and
	third bank payments.



Portugal XML SEPA Pain001 Credit Transfer	
BdP	
Spain XML SEPA Pain001 Credit Transfer	
AEB	
The Netherlands XML SEPA Pain001 Credit	This is the standard SEPA 'bulk
Transfer NVB	payment' format type. Bulk
	payments are sent to ING via ING
	FTP Service or SWIFTNET FileAct.
The Netherlands XML SEPA Pain001 Credit	This format type is specific for
Transfer NVB for IBP MECT	InsideBusiness Payments Multiple
	SEPA Credit Transfers.
The Netherlands XML SEPA Pain001 Credit	This format type is specific for
Transfer NVB for IBP SECT	InsideBusiness Payments Single
	SEPA Credit Transfers.
The Netherlands XML SEPA Pain001 Credit	This format type is specific for the
Transfer NVB for The TAX department	TAX department.
XML Pain001 Credit Transfer for IBP Generic	This format type is used for mixing of
	Single payments including SEPA
	payments, International non-SEPA
	payments and domestic non-SEPA
	payments.
pain.001.001.02	
Belgium XML SEPA Pain001 Credit Transfer	
Febelfin	
PAF XML Pain001 Credit Transfer	Please inform at your ING contact if
	you are allowed to use this format
	type. This format type is used for
	mixing different payment types,
	including SEPA payments,
	International non-SEPA payments,
	domestic non-SEPA payments and
	third bank payments.
The Netherlands XML SEPA Pain001 Credit	
	This format type is specific for
Transfer NVB for IBP MECT	This format type is specific for InsideBusiness Payments <u>Multiple</u>
Transfer NVB for IBP MECT	This format type is specific for InsideBusiness Payments <u>Multiple</u> SEPA Credit Transfers.
Transfer NVB for IBP MECT The Netherlands XML SEPA Pain001 Credit	This format type is specific for InsideBusiness Payments <u>Multiple</u> SEPA Credit Transfers. This format type is specific for
Transfer NVB for IBP MECT The Netherlands XML SEPA Pain001 Credit Transfer NVB for IBP SECT	This format type is specific for InsideBusiness Payments <u>Multiple</u> SEPA Credit Transfers. This format type is specific for InsideBusiness Payments <u>Single</u>
Transfer NVB for IBP MECT The Netherlands XML SEPA Pain001 Credit Transfer NVB for IBP SECT	This format type is specific for InsideBusiness Payments <u>Multiple</u> SEPA Credit Transfers. This format type is specific for InsideBusiness Payments <u>Single</u> SEPA Credit Transfers.
Transfer NVB for IBP MECT The Netherlands XML SEPA Pain001 Credit Transfer NVB for IBP SECT The Netherlands XML SEPA Pain001 Credit	This format type is specific for InsideBusiness Payments <u>Multiple</u> SEPA Credit Transfers. This format type is specific for InsideBusiness Payments <u>Single</u> SEPA Credit Transfers. This format type is specific for the
Transfer NVB for IBP MECT The Netherlands XML SEPA Pain001 Credit Transfer NVB for IBP SECT The Netherlands XML SEPA Pain001 Credit Transfer NVB for The TAX department	This format type is specific for InsideBusiness Payments <u>Multiple</u> SEPA Credit Transfers. This format type is specific for InsideBusiness Payments <u>Single</u> SEPA Credit Transfers. This format type is specific for the TAX department.
Transfer NVB for IBP MECT The Netherlands XML SEPA Pain001 Credit Transfer NVB for IBP SECT The Netherlands XML SEPA Pain001 Credit Transfer NVB for The TAX department pacs incoming credit file	This format type is specific for InsideBusiness Payments <u>Multiple</u> SEPA Credit Transfers. This format type is specific for InsideBusiness Payments <u>Single</u> SEPA Credit Transfers. This format type is specific for the TAX department.
Transfer NVB for IBP MECT The Netherlands XML SEPA Pain001 Credit Transfer NVB for IBP SECT The Netherlands XML SEPA Pain001 Credit Transfer NVB for The TAX department pacs incoming credit file FI XML SEPA ICF Credit Transfer EBA RB4.0	This format type is specific for InsideBusiness Payments <u>Multiple</u> SEPA Credit Transfers. This format type is specific for InsideBusiness Payments <u>Single</u> SEPA Credit Transfers. This format type is specific for the TAX department. Format type specific for financial
Transfer NVB for IBP MECT The Netherlands XML SEPA Pain001 Credit Transfer NVB for IBP SECT The Netherlands XML SEPA Pain001 Credit Transfer NVB for The TAX department pacs incoming credit file FI XML SEPA ICF Credit Transfer EBA RB4.0 + RB5.0	This format type is specific for InsideBusiness Payments <u>Multiple</u> SEPA Credit Transfers. This format type is specific for InsideBusiness Payments <u>Single</u> SEPA Credit Transfers. This format type is specific for the TAX department. Format type specific for financial institutions.



SEPA direct debit	
pain.008.002.02	
Germany XML SEPA Pain008 Direct Debit	
ZKA	
pain.008.001.02	
Austria XML SEPA Pain008 Direct Debit	
STUZZA	
Belgium XML SEPA Pain008 Direct Debit	
Febelfin	
France XML SEPA Pain008 Direct Debit GUF	
Germany XML SEPA Pain008 Direct Debit	
ZKA	
Luxembourg XML SEPA Pain008 Direct Debit	
Spain XML SEPA Pain008 Direct Debit AEB	
The Netherlands NVB SEPA Direct Debit	This format type is specifically for
Transfer for MINGZ	the channel Mijn ING Zakelijk.
The Netherlands XML SEPA Pain008 Direct	This is the standard SEPA 'bulk
Debit NVB	collections' format type. Bulk
	collections are sent to ING via ING
	FTP Service or SWIFTNET FileAct.
The Netherlands XML SEPA Pain008 Direct	This format type is specifically for
Debit NVB IBP	the channel InsideBusiness
	Payments.
pain.008.001.01	
Belgium XML SEPA Pain008 Direct Debit	
Febelfin	
pacs incoming debit file	
FI XML SEPA IDF Direct Debit EBA RB4.0 +	Format type specific for financial
RB5.0	institutions.



These are four errors and warnings which need some additional information. We are working on improving these messages.

```
Error/Warning
XML Validation Error
cvc-elt.1: Cannot find the declaration of element 'Document'.
2<Document
xmlns="urn:iso:std:iso:20022:tech:xsd:pain.008.001.02">
3 <CstmrDrctDbtInitn>
4
```

This usually means that the tag '<Document>' includes either a typo or an incorrect reference to the xsd type. In this case the xsd type is 'xsd:pain.008.001.02'. A very common mistake. Please check if you inserted the correct '<Document>' definition or if you selected the correct validation service.

XML Validation Warning

Character(s) which don't comply with the allowed character set has been found.

Character	Times found
&	1
;	1

The valid character set consists of the following characters:

```
abcdefghijklmnopqrstuvwxyz
ABCDEFGHIJKLMNOPQRSTUVWXYZ
0123456789
/-?:().,'+
Space
```

Not respecting this character set could lead to rejections. Please correct your data and re-invoke the validation process.

This check on characters is a validation <u>warning</u>. Meaning that processing of this file can't be guaranteed when using these characters. The advice is to avoid the usage of 'special characters' as much as possible. However, ING does support the advice of the European Payments Council for character conversion. This means ING allows all utf-8 compliant characters. (following format types are excluded and only support Basic Latin Characters: The Netherlands SEPA Credit Transfer via FTP/SWIFT, The Netherlands SEPA Credit Transfer for IBP M-ECT and The Netherlands SEPA Direct Debit for IBP). All other characters (non-utf-8) <u>can</u> lead to rejections.



Germany XML SEPA Pain001 Credit Transfer ZKA

An error has occurred: The uploaded file contains invalid XML: .

This error occurs when a fatal structure error has been made. We are working on providing more information about this type of error. Our advice is to open the file in a web browser like Internet Explorer. The web browser often tries to read the file and shows where it stopped reading because of the fatal error (be sure to rename the file to a '.xml.' extension. Example:

The XML page cannot be displayed

Cannot view XML input using XSL style sheet. Please correct the error and then click the $\underline{\text{Refresh}}$ button, or try again later.

A name contained an invalid character. Error processing resource 'file:///C:/Users/z808741/Desktop/5106_UTF 8.XML'. Line 4...

<Grp Hdr>

As you can see a 'space' was used in the element < GrpHdr>, which is not allowed.

The file you have submitted contains too many errors and cannot be validated. Please review/correct the file and submit it again for validation. If you need assistance, please contact your ING representative.

This message is shown when a file includes too many errors. Often this occurs when a production file is tested in the tool. Our advice is to use small test files with 1-10 payments and 1-3 batches and avoid the usage of production data in this tool.

